Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL QUALITY MEASURES CLEARINGHOUSE

General

Title

Stroke and stroke rehabilitation: percentage of final reports for CT or MRI studies of the brain performed within 24 hours of arrival to the hospital for patients aged 18 years and older with either a diagnosis of ischemic stroke or TIA or intracranial hemorrhage or at least one documented symptom consistent with ischemic stroke or TIA or intracranial hemorrhage that include documentation of the presence or absence of each of the following: hemorrhage and mass lesion and acute infarction.

Source(s)

American Academy of Neurology, American College of Radiology, Physician Consortium for Performance ImprovementÂ®, National Committee for Quality Assurance. Stroke and stroke rehabilitation physician performance measurement set. Chicago (IL): American Medical Association (AMA), National Committee for Quality Assurance (NCQA); 2009 Feb. 20 p.

Measure Domain

Primary Measure Domain

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the Measure Validity page.

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of final reports for computed tomography (CT) or magnetic resonance imaging (MRI) studies of the brain performed within 24 hours of arrival to the hospital for patients aged 18 years and older with either a diagnosis of ischemic stroke or transient ischemic attack (TIA) or intracranial hemorrhage or at least one documented symptom consistent with ischemic stroke or TIA or intracranial hemorrhage that include documentation of the presence or absence of each of the following: hemorrhage and mass lesion and acute infarction.

To promote a comprehensive approach to performance improvement, the Stroke and Stroke Rehabilitation Measurement Set is intended for use in its entirety when measuring clinical quality in the care of eligible patients. Full implementation of this measurement set for patients with a diagnosis of ischemic stroke or transient ischemic attack (TIA) should always include the Physician Consortium for Performance Improvement® measure, Radiology: Stenosis Measurement in Carotid Imaging Reports.

Rationale

The computed tomography (CT) and magnetic resonance imaging (MRI) findings are critical to initiating care for the patient with stroke. All CT and MRI reports should address the presence or absence of these three important findings. This documentation is particularly vital in the report of the first imaging study performed after arrival at the hospital, on which initial treatment decisions will be based.*

*The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:

Brain imaging is required to guide acute intervention. (Grade A) There is a uniform agreement that CT accurately identifies most cases of intracranial hemorrhage and helps discriminate nonvascular causes of neurological symptoms (e.g., brain tumor). With the advent of rtPA treatment, interest has grown in using CT to identify subtle, early signs of ischemic brain injury (early infarct signs) or arterial occlusion that might affect decisions about treatment. The presence of these signs is associated with poor outcomes. (American Stroke Association [ASA])

A technically adequate head CT scan is required prior to administration of thrombolytic therapy to exclude brain hemorrhage and nonischemic diagnoses. The baseline CT scan is also sensitive for detection of early signs of cerebral infarction. Subtle or limited signs of early infarction on the CT scan are common even within the first 3 h of stroke evolution. Preliminary data suggest that specific MRI profiles may identify patients who are particularly likely to benefit from thrombolytic therapy. New MRI techniques including perfusion-weighted and diffusion-weighted may detect ischemic injury in the first hour and may reveal the extent of reversible and irreversible injury. In addition, MRI appears to be highly sensitive for identification of acute brain hemorrhage. (American College of Chest Physicians [ACCP])

Primary Clinical Component

Ischemic stroke; transient ischemic attack (TIA); intracranial hemorrhage; computed tomography (CT) or magnetic resonance imaging (MRI) of the brain; hemorrhage; mass lesion; acute infarction

Denominator Description

All final reports for computed tomography (CT) or magnetic resonance imaging (MRI) studies of the brain performed within 24 hours of arrival to the hospital for patients aged 18 years and older with either a diagnosis of ischemic stroke or transient ischemic attack (TIA) or intracranial hemorrhage OR at least one documented symptom consistent with ischemic stroke or TIA or intracranial hemorrhage

Numerator Description

Final reports of the initial computed tomography (CT) or magnetic resonance imaging (MRI) that include documentation of the presence or absence of each of the following: hemorrhage and mass lesion and acute infarction

Evidence Supporting the Measure

Evidence Supporting the Criterion of Quality

A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

Evidence Supporting Need for the Measure

Need for the Measure

Use of this measure to improve performance

Evidence Supporting Need for the Measure

McGlynn EA, Asch SM, Adams J, Keesey J, Hicks J, DeCristofaro A, Kerr EA. The quality of health care delivered to adults in the United States. N Engl J Med. 2003 Jun 26;348(26):2635-45. PubMed

Thom T, Haase N, Rosamond W, Howard VJ, Rumsfeld J, Manolio T, Zheng ZJ, Flegal K, O'Donnell C, Kittner S, Lloyd-Jones D, Goff DC Jr, Hong Y, Adams R, Friday G, Furie K, Gorelick P, Kissela B, Marler J, Meigs J, Roger V, Sidney S, Sorlie P, Steinberger J, Wasserthiel-Smoller S, Wilson M, Wolf P. Heart disease and stroke statistics--2006 update: a report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Circulation. 2006 Feb 14;113(6):e85-151. PubMed

State of Use of the Measure

State of Use

Current routine use

Current Use

Internal quality improvement

National reporting

Application of Measure in its Current Use

Care Setting

Hospitals

Professionals Responsible for Health Care

Physicians

Lowest Level of Health Care Delivery Addressed

Individual Clinicians

Target Population Age

Age greater than or equal to 18 years

Target Population Gender

Either male or female

Stratification by Vulnerable Populations

Unspecified

Characteristics of the Primary Clinical Component

Incidence/Prevalence

Unspecified

Association with Vulnerable Populations

Unspecified

Burden of Illness

Unspecified

Utilization

Unspecified

Costs

Unspecified

Institute of Medicine (IOM) Healthcare Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding

Users of care only

Description of Case Finding

All final reports for computed tomography (CT) or magnetic resonance imaging (MRI) studies of the brain performed within 24 hours of arrival to the hospital for patients aged 18 years and older with either a diagnosis of ischemic stroke or transient ischemic attack (TIA) or intracranial hemorrhage OR at least one documented symptom consistent with ischemic stroke or TIA or intracranial hemorrhage

Denominator Sampling Frame

Patients associated with provider

Denominator Inclusions/Exclusions

Inclusions
All final reports for computed tomography (CT) or magnetic resonance imaging (MRI) studies of the brain performed within 24 hours of arrival to the hospital for patients aged 18 years and older with either a diagnosis of ischemic stroke or transient ischemic attack (TIA) or intracranial hemorrhage OR at least one documented symptom consistent with ischemic stroke or TIA or intracranial hemorrhage

Exclusions
None

Relationship of Denominator to Numerator

All cases in the denominator are equally eligible to appear in the numerator

Denominator (Index) Event

Clinical Condition

Diagnostic Evaluation

Institutionalization

Denominator Time Window

Time window is a fixed period of time

Numerator Inclusions/Exclusions

Inclusions
Final reports of the initial computed tomography (CT) or magnetic resonance imaging (MRI) that include documentation of the presence or absence of each of the following: hemorrhage and mass lesion and acute infarction

Exclusions
None

Measure Results Under Control of Health Care Professionals, Organizations and/or Policymakers

The measure results are somewhat or substantially under the control of the health care professionals,

organizations and/or policymakers to whom the measure applies.

Numerator Time Window

Institutionalization

Data Source

Administrative data

Medical record

Level of Determination of Quality

Individual Case

Pre-existing Instrument Used

Unspecified

Computation of the Measure

Scoring

Rate

Interpretation of Score

Better quality is associated with a higher score

Allowance for Patient Factors

Unspecified

Standard of Comparison

Internal time comparison

Evaluation of Measure Properties

Extent of Measure Testing

Unspecified

Identifying Information

Original Title

Measure #8: computed tomography (CT) or magnetic resonance imaging (MRI) reports.

Measure Collection Name

The Physician Consortium for Performance Improvement® Measurement Sets

Measure Set Name

Stroke and Stroke Rehabilitation Physician Performance Measurement Set

Submitter

American Medical Association on behalf of the American Academy of Neurology, American College of Radiology, Physician Consortium for Performance ImprovementÂ®, and National Committee for Quality Assurance - Medical Specialty Society

Developer

American Academy of Neurology - Medical Specialty Society

American College of Radiology - Medical Specialty Society

National Committee for Quality Assurance - Health Care Accreditation Organization

Physician Consortium for Performance ImprovementÂ® - Clinical Specialty Collaboration

Funding Source(s)

Unspecified

Composition of the Group that Developed the Measure

Joseph Drozda, Jr., MD (*Co-Chair*); Robert Holloway, MD, MPH (*Co-Chair*); David Seidenwurm, MD (*Co-Chair*); Chris Alexander, III, MD, FACP; John Barr, MD; Oscar Benavente, MD, FRCPC; Christopher Bever, Jr., MD, MBA; Thomas Bleck, MD FCCM; Ronald Gabel, MD; Judith Hinchey, MD; Irene Katzan, MD; Rahul K. Khare, MD; Michael Lev, MD; John McMahon, MD; Mark Morasch, MD, FACS; Suresh Mukherji, MD; Konrad C. Nau, MD; Sam J. W. Romeo, MD, MBA; Eric Russell, MD, FACR; Marilyn Rymer, MD; Ajay Sharma, MD; John Schneider, MD, PhD; Timothy Shephard, PhD; Michael A. Sloan, MD, MS; William D. Smucker, MD, CMD; Patrick Turski, MD, FACR; Linda Williams, MD; Richard Zorowitz, MD

Sarah Tonn, MPH, American Academy of Neurology

Sandra H. Bjork, RN, JD, American College of Radiology

Penelope Solis, JD, American Heart Association/American Stroke Association

Andrea Gelzer, MD, MS, FACP, Health Plan Representative

Mark Antman, DDS, MBA, American Medical Association; Karen S. Kmetik, PhD, American Medical Association; Beth Tapper, MA, American Medical Association; Samantha Tierney, MPH, American Medical Association

Rebecca A. Kresowik, Facilitator; Timothy F. Kresowik, MD, Facilitator

Financial Disclosures/Other Potential Conflicts of Interest

Conflicts, if any, are disclosed in accordance with the Physician Consortium for Performance Improvement® conflict of interest policy.

Endorser

National Quality Forum - None

Included in

Ambulatory Care Quality Alliance

Physician Quality Reporting Initiative

Adaptation

Measure was not adapted from another source.

Release Date

2006 Sep

Revision Date

2009 Feb

Measure Status

This is the current release of the measure.

The Physician Consortium for Performance Improvement reaffirmed the currency of this measure in November 2010.

Source(s)

American Academy of Neurology, American College of Radiology, Physician Consortium for Performance ImprovementÂ®, National Committee for Quality Assurance. Stroke and stroke rehabilitation physician performance measurement set. Chicago (IL): American Medical Association (AMA), National Committee for Quality Assurance (NCQA); 2009 Feb. 20 p.

Measure Availability

The individual measure, "Measure #8: Computed Tomography (CT) or Magnetic Resonance Imaging (MRI) Reports," is published in the "Stroke and Stroke Rehabilitation: Physician Performance Measurement Set." This document and technical specifications are available in Portable Document Format (PDF) from the American Medical Association (AMA)-convened Physician Consortium for Performance ImprovementÂ® Web site: www.physicianconsortium.org .

For further information, please contact AMA staff by e-mail at cqi@ama-assn.org.

NQMC Status

This NQMC summary was completed by ECRI Institute on September 13, 2007. The information was verified by the measure developer on October 26, 2007. This NQMC summary was edited by ECRI Institute on September 28, 2009. The information was reaffirmed by the measure developer on November 17, 2010.

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